



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.: 09/551,523  
Filed: April 18, 2000  
Inventor(s):  
Shah et al.

Examiner: Ha, Leynna A.  
Group/Art Unit: 2135  
Atty. Dkt. No: 6000-04802

Title: CONTROLLING ACCESS  
TO INFORMATION  
OVER A MULTIBAND  
NETWORK

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Signature

1-3-05  
Date

**APPEAL BRIEF**

## Mail Stop Appeal Brief - Patents

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir/Madam:

Further to the Notice of Appeal of November 2, 2004, Appellants present this Appeal Brief. Appellants respectfully request that this appeal be considered by the Board of Patent Appeals and Interferences.

## **I. REAL PARTY IN INTEREST**

The subject application is owned by Sun Microsystems, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having its principal place of business at 4150 Network Circle, Santa Clara, CA, 95054, as evidenced by the assignment recorded at Reel 011071, Frame 0001.

## **II. RELATED APPEALS AND INTERFERENCES**

No other appeals or interferences are known which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

## **III. STATUS OF CLAIMS**

Claims 49-96 are pending in the present application. Claims 49-96 stand finally rejected and are the subject of this appeal. A copy of claims 49-96, as on appeal (incorporating all amendments), is included in the Claims Appendix hereto.

## **IV. STATUS OF AMENDMENTS**

No amendment to the claims has been filed subsequent to the final rejection. The Claims Appendix reflects the current state of the rejected claims.

## **V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Independent claim 49 is directed to a method for controlling access to a continuous stream of content, such as a television program, transmitted over a plurality of communication paths. FIG. 3 illustrates an embodiment in which the plurality of communication paths comprise frequency paths 302-310 in a cable or communication medium 300. FIGS. 3 and 4 illustrates embodiments in which the stream source comprises a head end server 402 and head end 312, 402 and the stream destination comprises a set-top platform 420 and subscriber 314. The head end is further described at

page 23, line 19 through page 25, line 7 of the specification. A plurality of notifications for determining a sequence of transmission of the continuous stream of content are transmitted from the server via the plurality of communication paths. The plurality of notifications are obtained by a client. (*See, e.g.*, the switching software described at page 27, line 13 through page 29, line 10.) The continuous stream of content is transmitted from the server via the plurality of communication paths according to the sequence of transmission. The client obtains the continuous stream of content by automatically switching communication paths in accordance with the sequence of transmission of the content based on the plurality of obtained notifications. (*See, e.g.*, page 27, lines 1-12 and page 29, line 11 through page 31, line 23.)

Independent claim 58 is directed to a method for controlling access to content having a plurality of parts and transmitted over a plurality of communication paths. (*See, e.g.*, FIGS. 3 and 4.) An encrypted notification of a communication path is transmitted. (*See, e.g.*, the switching and encrypting software described at page 27, line 13 through page 29, line 10.) A part of the content is transmitted at a given time on the communication path. A second encrypted notification of another communication path is transmitted. A second part of the content is transmitted at a second given time on the second communication path. (*See, e.g.*, page 27, lines 1-12 and page 29, line 11 through page 31, line 23.)

Independent claim 66 is directed to a method for controlling access to content having a plurality of parts and transmitted over a plurality of communication paths. (*See, e.g.*, FIGS. 3 and 4.) A notification of a communication path is transmitted from a server to a client. A part of the content will be transmitted on the communication path at a given time. (*See, e.g.*, the switching software described at page 27, line 13 through page 29, line 10.) The client automatically switches to the communication path. The part of the content is transmitted on the communication path at the given time to the client. The part of the content is viewed on the communication path via the client. A second notification of a second communication path is transmitted from the server to the client. The second

part of the content will be transmitted at the second given time on the second communication path. The client automatically switches to the second communication path, and the second part of the content is transmitted on the second communication path at the second given time to the client. (*See, e.g.*, page 27, lines 1-12 and page 30, line 1 through page 31, line 23.) Both parts of the content are viewed on the respective communication paths via the client. (*See, e.g.*, page 27, lines 8-10.)

Independent claim 73 is directed to a method for controlling access to content transmitted over a plurality of communication paths. (*See, e.g.*, FIGS. 3 and 4.) Mapping information for the content is transmitted to a subset of a plurality of clients in a secure manner. (*See, e.g.*, page 27, lines 1-12.) The content is transmitted over the plurality of communication paths to the plurality of clients. The subset of the plurality of clients automatically switch to a communication path that is transmitting the content. (*See, e.g.*, page 30, line 1 through page 31, line 23.) The subset of the plurality of clients are signaled with modified mapping information on a repeated basis during the course of a viewed presentation. (*See, e.g.*, page 30, lines 18-22.) The subset of the plurality of clients automatically switch to a modified communication path based on the modified mapping information. (*See, e.g.*, page 30, line 1 through page 31, line 23.)

Independent claim 83 is directed to a system for controlling access to content comprising. The system comprises a plurality of communication paths, a server, a plurality of notifications for determining a sequence of transmission of a content via the plurality of communication paths, and a client. (*See, e.g.*, FIGS. 3 and 4.) The content has a plurality of parts. The client is coupled to the server via the plurality of communication paths. The plurality of notifications are transmitted from the server to the client. The plurality of parts of the content are transmitted from the server over the plurality of communication paths in accordance with the sequence of transmission. The client obtains the plurality of parts of the content by automatically switching communication paths in accordance with the sequence of transmission of the content

based on the plurality of obtained notifications. (*See, e.g.*, page 27, lines 1-12 and page 30, line 1 through page 31, line 23.)

Independent claim 90 is directed to a system for controlling access to content. The system comprises a content having a plurality of parts, a plurality of communication paths, a server, and a plurality of encrypted notifications. (*See, e.g.*, FIGS. 3 and 4.) Each of the plurality of encrypted notifications notifies a client of a communication path on which a corresponding part of the content will be transmitted at a given time. The server repeatedly transmits an encrypted notification of the plurality of notifications until all parts of the content have been transmitted. (*See, e.g.*, page 27, lines 1-12 and page 28, line 10 through page 31, line 23.)

Independent claim 96 is directed to a system for controlling access to content. The system comprises an individual television program having a plurality of parts, a plurality of communication paths, a selected client, and a server coupled to the client via the plurality of communication paths. (*See, e.g.*, FIGS. 3 and 4.) The server transmits a notification to the client of a communication path on which a part of the program will be transmitted at a given time. The server also transmits a second notification to the client of a second communication path on which a second part of the program will be transmitted at a second given time. The client automatically switches to the communication path at the given time and automatically switches to the second communication path at the second given time. (*See, e.g.*, page 27, lines 1-12 and page 30, line 1 through page 31, line 23.) The plurality of notifications are transmitted from the server to the client at irregular interval. (*See, e.g.*, page 30, lines 18-22.) The plurality of notifications are each encrypted at the server. (*See, e.g.*, page 28, line 10 through page 29, line 10.)

## **VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 49-96 are rejected under 35 U.S.C. § 102(b) as being anticipated

by Beyers, II et al. (U.S. Patent No. 5,235,619).

## VII. ARGUMENT

### First Ground of Rejection:

Claims 49-96 are rejected under 35 U.S.C. § 102(b) as being anticipated by Beyers, II et al. (U.S. Patent No. 5,235,619). Appellants traverse this rejection for the following reasons. Different groups of claims are addressed under their respective subheadings.

### Claims 49-57, 73-81, and 83-89:

Beyers fails to disclose a method for controlling access to a continuous stream of a content transmitted over a plurality of communication paths, the method comprising: transmitting from a server a plurality of notifications for determining a sequence of transmission of said continuous stream of said content via a plurality of communication paths; obtaining by a client said plurality of notifications; transmitting from said server said continuous stream of said content via said plurality of communication paths according to said sequence of transmission; and obtaining by said client said continuous stream of said content by automatically switching communication paths in accordance with said sequence of transmission of said content based on said plurality of obtained notifications.

Beyers discloses a method of transferring a data message from a remote unit (e.g., a cable television set-top box) to a central location (e.g., a head end) (Beyers, col. 17, line 1 through col. 21, line 37). The same message may be sent a plurality of times using a plurality of data channels (e.g., frequencies), wherein each of the data channels is used at a randomly generated time. The transmission technique disclosed by Beyers may be used for calibration (e.g., minimizing potential RF interference) of the RF data return path from the remote unit to the head end. Although the calibration transmissions in Beyers

may be sent using a plurality of frequencies, they are sent from a client (e.g., a cable television set-top box) to a server (e.g., a head end) and not from a server to a client. Beyers does disclose sending a data return request from the head end to the remote unit, but Beyers teaches that this is a single message and not “a plurality of notifications” to the client (Beyers, col. 13, lines 30-34 and col. 21, lines 3-7). Thus, Beyers does not teach or suggest the claim limitations of “transmitting from a server a plurality of notifications for determining a sequence of transmission of said continuous stream of said content via a plurality of communication paths” and “obtaining by a client said plurality of notifications.”

Furthermore, the content sent over a plurality of frequencies in Beyers is not a continuous stream, such as a television program. Instead, it is a single calibration message which is repeatedly sent from the remote unit at random times in a broken, discontinuous manner (Beyers, col. 21, lines 3-23). As discussed above, this content is not sent from a server to a client in Beyers, and Beyers does not teach or suggest the transmission of data from the head end to the remote unit using “a plurality of communication paths.” Therefore, Beyers does not teach or suggest the limitation “transmitting from said server said continuous stream of said content via said plurality of communication paths according to said sequence of transmission.”

Although the remote unit in Beyers may switch frequencies, this switching is done for the purpose of sending calibration data and not for obtaining a continuous stream of content (Beyers, col. 19, line 47 through col. 21, line 23). Accordingly, Beyers also fails to disclose the limitation “obtaining by said client said continuous stream of said content by automatically switching communication paths in accordance with said sequence of transmission of said content based on said plurality of obtained notifications.”

The teachings of Beyers do not meet the standard for anticipation which requires that the identical invention must be shown in as complete detail as is contained in the

claims. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1457, 221 USPQ 481, 485 (Fed. Cir. 1984). Appellants' invention as recited in claim 49 is clearly not anticipated by Beyers.

**Claims 58-65 and 90-95:**

Beyers fails to disclose a method for controlling access to a content having a plurality of parts transmitted over a plurality of communication paths, the method comprising: transmitting an encrypted notification of a communication path on which a part of said content will be transmitted at a given time; transmitting said part of said content on said communication path at said given time; transmitting another encrypted notification of another communication path on which another part of said content will be transmitted at another given time; and transmitting said another part of said content on said another communication path at said another given time.

The Examiner states that Beyers teaches the transmission of encrypted notifications at col. 20, lines 66-68; col. 40, lines 58-63; and col. 42, lines 2-25. At the cited locations, Beyers discloses Miller data encoding, also known as delay modulation or delay encoding, a well-known method for encoding binary data for transmission via RF signals. Beyers does not teach or suggest that the data is "encrypted." Nothing about the technique of Miller data encoding would "encrypt" the data by making it readable only by an intended recipient. Therefore, Beyers does not teach or suggest the claim limitations "transmitting an encrypted notification of a communication path on which a part of said content will be transmitted at a given time" and "transmitting another encrypted notification of another communication path on which another part of said content will be transmitted at another given time."



Additionally, Beyers discloses neither the transmission of a single item of content in two parts over two respective communication paths at two respective times nor any notifications of such transmission. The only item of content which is sent over a plurality of frequencies in Beyers is a calibration message (Beyers, col. 21, lines 3-23). This calibration message is not sent in two parts. Rather, the entire calibration message is sent from the remote unit to the head end repeatedly and at random times. Thus, Beyers fails to anticipate claim 58.

**Claims 66-72 and 96:**

In regard to claim 66, Beyers fails to disclose a method for controlling access to a content having a plurality of parts transmitted over a plurality of communication paths, the method comprising: transmitting a notification of a communication path on which a part of said content will be transmitted at a given time from a server to a client; switching automatically by said client of said communication path; transmitting said part of said content on said communication path at said given time to said client; viewing said part of said content on said communication path via said client; transmitting another notification of another communication path on which another part of said content will be transmitted at another given time from said server to said client; switching automatically by said client of said another communication path; transmitting said another part of said content on said another communication path at said another given time to said client; and viewing said another part of said content on said communication path via said client.

Beyers does not teach or disclose the transmission of viewable data (e.g., an individual television program) from a server to a client using a plurality of communication paths. The content which is transmitted over a plurality of communication paths (e.g., frequencies) in Beyers is not viewable via a client. Instead, it is a calibration message which is sent from the remote unit to the head end (Beyers, col. 21, lines 3-23). Furthermore, the content in Beyers is not sent in two parts: the entire calibration message is sent from the remote unit to the head end repeatedly and at random

times. Moreover, the calibration transmissions are sent from a client (e.g., a cable television set-top box) to a server (e.g., a head end) and not from a server to a client. Therefore, Beyers does not anticipate claim 66.

**Claim 82:**

Beyers does not disclose modified mapping information which comprises an indication to allow for switching of a dynamically selected next transmission communication path at a given time, wherein the indication comprises a frame number of the content. The Examiner asserted that these limitations are taught by Beyers at col. 20, lines 8-13, 45-48 and cols. 46-50. At the cited locations, Beyers discloses: the switching of a return channel (used for sending a calibration message) from channel “A” to channel “B” in a pre-programmed (not dynamic) manner; the automatic selection of a frequency for a return channel; and implementation details for the calibration system. Nowhere does Beyers teach or suggest that the indication to allow for switching of communication paths comprises a frame number of the content. Therefore, Beyers does not anticipate claim 82.

## VII. CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 49-96 was erroneous, and reversal of the Examiner's decision is respectfully requested.

The Commissioner is authorized to charge the appeal brief fee of \$500.00 and any other fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/6000-04802/BNK. This Appeal Brief is submitted with a return receipt postcard.

Respectfully submitted,



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## **IX. CLAIMS APPENDIX**

The claims on appeal are as follows.

49. A method for controlling access to a continuous stream of a content transmitted over a plurality of communication paths, the method comprising:

transmitting from a server a plurality of notifications for determining a sequence of transmission of said continuous stream of said content via a plurality of communication paths;

obtaining by a client said plurality of notifications;

transmitting from said server said continuous stream of said content via said plurality of communication paths according to said sequence of transmission; and

obtaining by said client said continuous stream of said content by automatically switching communication paths in accordance with said sequence of transmission of said content based on said plurality of obtained notifications.

50. The method of Claim 49, wherein said plurality of notifications are transmitted from said server at irregular intervals.

51. The method of Claim 49, wherein said sequence of transmission of said content determines which communication paths contain which parts of said continuous stream of said content at a given time.

52. The method of Claim 49, wherein said plurality of notifications are each encrypted prior to transmission from said server.

53. The method of Claim 52, wherein said client comprises a descrambler for decrypting said plurality of notifications and wherein said plurality of encrypted notifications are decrypted by said descrambler prior to said obtaining by said client said continuous stream of said content.

54. The method of Claim 52, wherein said continuous stream of said content is not encrypted prior to transmission on said plurality of communication paths.

55. The method of Claim 49, wherein said continuous stream of said content comprises an individual television program.

56. The method of Claim 49, further comprising viewing said continuous stream of said content via said client without being aware of said automatically switching of said communication paths.

57. The method of Claim 49, wherein said switching of said communication paths prevents a non-authorized viewer from viewing said continuous stream of said content.

58. A method for controlling access to a content having a plurality of parts transmitted over a plurality of communication paths, the method comprising:

transmitting an encrypted notification of a communication path on which a part of said content will be transmitted at a given time;

transmitting said part of said content on said communication path at said given time;

transmitting another encrypted notification of another communication path on which another part of said content will be transmitted at another given time; and

transmitting said another part of said content on said another communication path at said another given time.

59. The method of Claim 58, wherein said transmitting said another encrypted notification and said transmitting said another part of said content are repeated until all parts of said content have been transmitted.

60. The method of Claim 58, wherein said content comprises a continuous stream of an individual television program.

61. The method of Claim 58, wherein said plurality of notifications are transmitted at irregular intervals.

62. The method of Claim 58, further comprising viewing said plurality of parts of said content via an authorized client, wherein each of said plurality of notifications is decrypted at said authorized client prior to transmission of said corresponding part of said content.

63. The method of Claim 62, wherein said plurality of parts of said content are not encrypted prior to transmission on said plurality of communication paths.

64. The method of Claim 58, further comprising viewing said plurality of parts of said content via a client that automatically switches to said communication path and to said another communication path based on said plurality of notifications.

65. The method of Claim 58, wherein said transmitting said part of said content on said communication path and said transmitting said another part of said content on said another communication path prevent a non-authorized viewer from viewing said plurality of parts of said content.

66. A method for controlling access to a content having a plurality of parts transmitted over a plurality of communication paths, the method comprising:

transmitting a notification of a communication path on which a part of said content will be transmitted at a given time from a server to a client;

switching automatically by said client of said communication path;

transmitting said part of said content on said communication path at said given time to said client;

viewing said part of said content on said communication path via said client;  
transmitting another notification of another communication path on which another part of said content will be transmitted at another given time from said server to said client;  
switching automatically by said client of said another communication path;  
transmitting said another part of said content on said another communication path at said another given time to said client; and  
viewing said another part of said content on said communication path via said client.

67. The method of Claim 66, wherein said transmitting said another notification, said automatic switching by said client of said another communication path, said transmitting said another part of said content, and said viewing said another part of said content are all repeated until all parts of said content have been transmitted.

68. The method of Claim 66, wherein said content comprises a continuous stream of an individual television program.

69. The method of Claim 66, wherein said plurality of notifications are transmitted at irregular intervals.

70. The method of Claim 66, wherein said plurality of notifications are each encrypted prior to transmission from said server.

71. The method of Claim 70, wherein said plurality parts of said content are not encrypted prior to transmission from said server.

72. The method of Claim 66, wherein said transmitting said part of said content of said communication path, said automatically switching to said communication path, said transmitting said another part of said content on said another communication

path, and said automatically switching to said another communication path prevent a non-authorized viewer from viewing said plurality of parts of said content.

73. A method for controlling access to a content transmitted over a plurality of communication paths, the method comprising:

transmitting to a subset of a plurality of clients in a secure manner mapping information for a content transmitted over said plurality of communication paths to said plurality of clients;

switching automatically by said subset of said plurality of clients to a communication path of said plurality of communication paths that is transmitting said content;

signaling said subset of said plurality of clients with modified mapping information on a repeated basis during a course of a viewed presentation; and

switching automatically by said subset of said plurality of clients to a modified communication path of said plurality of communication paths based on said modified mapping information.

74. The method of Claim 73, wherein said switching automatically by said subset of said plurality of clients to said communication path and to said modified communication path are performed without interfering with a continuity of a presentation of said content on said subset of said plurality of clients.

75. The method of Claim 74, wherein said switching automatically by said subset of said plurality of clients to said communication path and to said modified communication path are performed without a viewer of said content knowing of said switching.

76. The method of Claim 74, wherein said mapping information is transferred via a dedicated communication path.



77. The method of Claim 74, wherein said signaling said plurality of clients with modified mapping information is repeated at irregular intervals.

78. The method of Claim 74, wherein said signaling said plurality of clients with modified mapping information is repeated at semi-random intervals.

79. The method of Claim 74, wherein said signaling said plurality of clients with modified mapping information is repeated at intervals determined dynamically.

80. The method of Claim 74, further comprising dynamically selecting a next content transmission communication path.

81. The method of Claim 80, wherein said modified mapping information comprises an indication to allow for switching of said next transmission communication path at a given time.

82. The method of Claim 81, wherein said indication comprises a frame number of said content.

83. A system for controlling access to a content comprising:  
a plurality of communication paths;  
a server;  
a plurality of notifications for determining a sequence of transmission of a content having a plurality of parts via said plurality of communication paths; and  
a client coupled to said server via said plurality of communication paths;  
wherein said plurality of notifications are transmitted from said server to said client;  
wherein said plurality of parts of said content are transmitted from said server over said plurality of communication paths in accordance with said sequence of transmission; and

wherein said client obtains said plurality of parts of said content by automatically switching communication paths in accordance with said sequence of transmission of said content based on said plurality of obtained notifications.

84. The system of Claim 83, wherein said plurality of notifications are transmitted from said server at irregular intervals.

85. The system of Claim 83, wherein said sequence of transmission determines which communication paths contain which parts of said content at a given time.

86. The system of Claim 83, wherein said plurality of notifications are each encrypted prior to transmission from said server and wherein said plurality of notifications are decrypted at said client.

87. The system of Claim 86, wherein said plurality of parts of said content are not encrypted prior to transmission from said server.

88. The system of Claim 86, wherein said content comprises a continuous stream of an individual television program.

89. The system of Claim 86, wherein said content comprises a web page.

90. A system for controlling access to a content comprising:

a content having a plurality of parts;

a plurality of communication paths;

a server; and

a plurality of encrypted notifications, each of said plurality of encrypted notifications notifying a client of a communication path on which a corresponding part of said content will be transmitted at a given time;

wherein said server repeatedly transmits an encrypted notification of said plurality of notifications until all parts of said content have been transmitted.

91. The system of Claim 90, wherein said content comprises a continuous stream of an individual television program.

92. The system of Claim 90, wherein said plurality of notifications are transmitted from said server at irregular intervals.

93. The system of Claim 90, further comprising a client for obtaining said plurality of parts of said content and wherein each of said plurality of notifications is decrypted prior to said client obtaining said corresponding part of said content.

94. The system of Claim 93, wherein said plurality of parts of said content are not encrypted prior to transmission from said server.

95. The system of Claim 93, further comprising a client for obtaining said plurality of notifications and wherein said client obtains said plurality of parts of said content by automatically switching communication paths in accordance with a sequence of transmission of said content based on said plurality of obtained notifications.

96. A system for controlling access to a content comprising:  
an individual television program having a plurality of parts;  
a plurality of communication paths;  
a selected client; and  
a server coupled to said client via said plurality of communication paths, said server transmitting a notification to said client of a communication path of said plurality of communication paths on which a part of said program will be transmitted at a given time and transmitting another notification to said client of another communication path of

said plurality of communication paths on which another part of said program will be transmitted at another given time;

wherein said client automatically switches to said communication path at said given time and automatically switches to said another communication path at said another given time;

wherein said plurality of notifications are transmitted from said server to said client at irregular intervals; and

wherein said plurality of notifications are each encrypted at said server.

**X. EVIDENCE APPENDIX**

No evidence submitted under 37 C.F.R. §§ 1.130, 1.131, or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

**XI. RELATED PROCEEDINGS APPENDIX**

There are no related proceedings.